

DETAILED ACTION

The amendment filed on 1/31/11 is acknowledged. Claims 15-23 and 25-31 are now pending. Claims 15-23 and 26-31 been amended, and claim 24 has been cancelled.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15-16, 18, 21, 23, 26, 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schirico (US 4,806,736), in view of Von Arx et al (US 6,519,835), hereafter Von.

Regarding claims 15, 16, 29, the phrase "the heater bag being suitable for use in complete safety for quickly warming bakery products until a temperature between 36°C and 44°C starting from a lower ambient temperature while fully conserving the quality and the integrity of these products and simultaneously improving their flavor" is intended use, and Schirico teaches a bag suitable for such use.

Schirico teaches a heater bag for bakery products made using a flour-based dough (pizza), the heater bag comprising a flexible or semi-rigid casing defining a bottom (flexible bag 12, bottom panel 14), side walls (side panels 15, 16); an opening

(panel 16 can be open), and means for selectively closing the opening (col. 3, lines 29-36), wherein the heater bag includes at least one semi-flexible heater plate (heating element 32) having an electrical heater element incorporated therein (flexible resistor 34) and said at least one semi-flexible heater plate being inserted in a pocket (depression 31); said pocket constituting a portion of the bottom, and wherein, for each said at least one semi-flexible heater plate, the heating power is about 3 watts per in², or about 0.46 watts per cm² (col. 3, line 59, the resistance of the resistor is about 3 watts per in²).

Though Schirico does not teach explicitly that the heating power for each said at least one semi-flexible heater plate lies in the range of 0.13 W to 0.24 W per cm², or 0.16 W to 0.20 W per cm², however Schirico teaches that the resistance of the resistor is about 3 watts per in², as power is calculated by $P = \frac{V^2}{R} = I^2 R$, thus the heating power is also dependent on the voltage or current supplied to the resistor; further since the temperature rising inside the heating back depends on the heating power, thus it would have been obvious to a person of ordinary skill in the art at the time the invention was made to choose an appropriate value of voltage or current or resistance to obtain a heating power ideal for different content of the heater bag and the desired target temperature and rising time. In addition, since the instant specification discloses two heater plates included in the heater bag, thus the total heating power of the heater bag is in the range of 0.26 W to 0.48 W per cm², or 0.32 W to 0.40 W per cm², so the total heating power of 0.46 watts per cm² of Schirico is comparable to the total power of the claimed invention.

Schirico teaches that the heater bag is made of heavy fabric (col. 3, lines 24-25), but does not explicitly disclose that the pocket is made of natural material comprising cotton, flax, and wool.

In the same field of endeavor of semi-rigid heating element for heating bags, Von teaches that the supporting material for the heating wires can be natural material comprising cotton, and wool (col. 6, lines 14-16) for different thickness, porosity etc..

Thus it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use natural materials such as cotton, wool, etc for supporting the heating element of Schirico to achieve different thickness, porosity, chemistry characteristics.

Regarding claim 18, Schirico further teaches that the power supply voltage for the heater element of each said at least one semi-flexible heater plate lies in the range of 100 V to 240 V (col. 4, line 1).

Regarding claim 21, 30, Schirico further teaches that each semi-flexible heater plate comprises an electrical resistance wire (34) integrated in a sheet (Fig. 4, 33) that is inserted in sheets of silicone glass fabric (32, silicone rubber).

Regarding claim 23, Schirico also teaches the means for selectively closing the opening are constituted by a simple flexible flap or by closure means disposed in the vicinity of the rim of the opening (Col. 3, lines 32-36).

Schirico does not teach the heater bag is elongate in shape, however it would have been obvious to a person of ordinary skill in the art at the time the invention was made to make the heater bag of different shapes according to the shapes of the food to be heated in the heater bag.

Regarding claim 26, Schirico also teaches that the heater bag further comprises a temperature limiter (thermostat 36) integrated in each said at least one semi-flexible heater plate.

Regarding claims 28, 31, Schirico also teaches that each semi-flexible heater plate is removable relative to the pocket in which it is inserted (col. 3, lines 50-54, the heating element is a separate unit).

3. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schirico (US 4,806,736), in view of Von Arx et al (US 6,519,835), hereafter Von, and further in view of Macy (US 2,021,458).

Regarding claim 22, Schirico in view of Von teaches the limitations of claim 15, but does not teach that each pocket incorporating a semi-flexible heater plate comprises firstly an outer cotton lining and a flannelette disposed between the outer cotton lining and said heater plate, and secondly an inner cotton lining placed on the inside relative to said heater plate.

In the same field of endeavor of heating pad, Macy teaches a heating pad incorporating a semi-flexible heater plate (Fig. 2, 11) comprises firstly an outer cotton lining and a flannelette (cotton felting 9) disposed between the outer cotton lining and

said heater plate, and secondly an inner wool lining placed on the inside relative to said heater plate.

Thus it would have been obvious to a person of ordinary skill in the art at the time the invention was made to embed the heating element 32 of Schirico in a cotton felting instead of the fiberglass as an alternative for insulation, and encase the heating element in cotton/wool or cotton/cotton outer/inner liners for different thickness and porosity purposes.

4. Claims 17, 19-20, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schirico (US 4,806,736), in view of Von Arx et al (US 6,519,835), hereafter Von, and further in view of Forrester et al. (US 6,281,477), hereafter Forrester.

Regarding claim 17, Schirico in view of Von teaches the limitations of claim 15, but does not teach that the heater bag includes first and second semi-flexible heater plates, each having a heater element incorporated therein and the heater plates being inserted in pockets of natural material constituting a portion of the bottom of the side walls, or of the means for closing the heater bag.

In the same field of endeavor of heated delivering bag, Forrester teaches a heater bag includes first and second semi-flexible heater plates (168 in pocket 142, 144), each having a heater element incorporated therein (Col. 7, lines 52-55) and said first and second semi-flexible heater plates being inserted in pockets constituting a portion of the bottom of the side walls, or of the means for closing the heater bag (Col. 6, lines 43-48).

Thus it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include additional heating element on the top or side panels so that more heating power can be provided at the same time to heat the contents of the heater bag faster.

Regarding claim 19, Forrester also teaches that the first and second heater plates are incorporated in two opposite portions of the side walls (Fig. 1, pocket 142, 144).

Regarding claim 20, Forrester also teaches that the first and second heater plates are incorporated firstly in the bottom of the heater bag and secondly in the means for selectively closing the opening (Col. 6, lines 43-48).

Regarding claim 27, Forrester also teaches that the heater bag includes a pair of semi-flexible heater plates disposed in two opposite main faces of the heater bag (Fig. 1, face 104 and 106), and wherein the walls uniting these opposite main faces present a capacity for deformation in a direction perpendicular to said opposite main faces (Col. 6, lines 60-64, walls 110 and 112 are deformable since they are made of fabric).

5. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schirico (US 4,806,736), in view of Von Arx et al (US 6,519,835), hereafter Von, and further in view of Kochman et al. (US Patent No. 6,563,094), hereafter Kochman.

Regarding claim 25, Schirico in view of Von teaches the limitations of claim 15, but does not teach that the heater bag includes a switch for selectively connecting the heater elements in series for powering from a power supply at a first nominal voltage

V_{N1} , or in parallel for powering from a power supply at a second nominal voltage V_{N2} equal to half the first nominal voltage V_{N1} .

In the same field of soft heaters, Kochman teaches a heater that includes a switch (10 and 10') for selectively connecting the heater elements in series for powering from a power supply at a first nominal voltage V_{N1} , or in parallel for powering from a power supply at a second nominal voltage V_{N2} equal to half the first nominal voltage V_{N1} (Col. 4, lines 61-64, since the heater is designed for a variety of input voltages, thus it can be powered by a nominal voltage V_{N1} and V_{N2} , Where $V_{N2}=1/2 V_{N1}$).

Thus it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate such a switch in Schirico so that the heating bag can be used in both power supply with 110 or 220 voltages.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive. Applicants argue that the heater bag of Schirico is to keep the pizza hot, not for warming bakery products starting from an ambient temperature. Applicants are arguing about the intended use of the heater bag. Independent claims 1 and 29 are directed to an apparatus-a heating bag. Schirico in view of Von Arx et al teaches a heating bag meeting the **structural limitations** of the claimed invention, and the heating bag of Schirico in view of Von Arx can be used to maintain a high temperature of 140F°, i.e. to keep the pot pizza hot; or to warm up a bakery product from a lower temperature

(ambient) to a higher temperature because inherently a cold item will be warmed up when being heated.

Applicants' argument that "180°F (82°C) mentioned by Schirico is being an upper limit of the heater plate" is incorrect because the 180°F is the target temperature inside the bag (col. 2, line 22-23), not the temperature of the heater plate itself, which should be much higher. Further, Schirico teaches a thermostat to turn off the heater when the higher targeted temperature "180°F" is reached and turn on when the lower targeted temperature "165°F" is reached. In other words, when the heater is not turned off, the temperature of the heater plate can keep going up. So 180°F is one value of the targeted temperatures, not the upper limit of the heater bag or heater plate. Furthermore, one ordinary skill in the art can set up different targeted temperature ranges for the thermometer according to different heating needs.

Applicants argue that "nylon or polyester would be dangerous and unsuitable for a heater bag according to the present invention since they are likely to burn at the required temperatures". Schirico teaches a heater bag made of heavy fabric to maintain a temperature within the bag between 165°F to 180°F, thus clearly the fabric can sustain a temperature at least between 165°F to 180°F. Von Arx teaches an infinite variety (col. 6, line 22) of fabric to be used with the heating element for different chemistry, porosity, etc. Thus it would have been obvious to a person of ordinary skill in the art at the time the invention was made to choose from the infinite varieties of fabric a type that won't melt or burn at the targeted high temperature such as a natural fabric, cotton or wool, etc.

Applicants argue the heating power of Schirico per cm² is twice or more. As discussed above, firstly, when two more heating plates is used in the claimed invention, the heating power for the bag is two or more times the value of the claimed heating power; Secondly, the power is also dependent on the voltage and current passing the heating resistor, the power is variable according to different voltage supply; thirdly, one ordinary skill in the art can adjust the power according to the heating needs.

In summary, the claimed invention is directed to an apparatus and is structurally met by the cited prior art.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JIANYING ATKISSON whose telephone number is (571)270-7740. The examiner can normally be reached on Mon-Friday. 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571)-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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